

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-8. (Cancelled).

9. (Original) A method of solubilizing a BTCS having the structure

YZ-TCRO-ZY

where:

Y = a cation

Z = a polar group which is associated with the cation, and

TCRO = trans carotenoid skeleton

comprising the steps of:

- a) preparing a dilute solution of sodium carbonate or sodium bicarbonate,
- b) adding said dilute solution to deionized water to raise the pH to 7 or above,
- c) adding a BTCS to the solution of step b).

10. (Original) A method of solubilizing a BTCS having the structure

YZ-TCRO-ZY

where:

Y = a cation

Z = a polar group which is associated with the cation, and

TCRO = trans carotenoid skeleton

comprising the steps of:

- a) adding a BTCS to a saline solution,
- b) removing undissolved material.

11. (Original) A method of solubilizing a BTCS having the structure



where:

Y = a cation

Z = a polar group which is associated with the cation, and,

TCRO = trans carotenoid skeleton.

comprising the steps of:

- a) adding a base to water to make a basic solution,
- b) adding a BTCS to said solution.

12. (Original) A method of solubilizing a BTCS having the structure



where:

Y = a cation

Z = a polar group which is associated with the cation, and

TCRO = trans carotenoid skeleton

comprising the steps of:

- a) preparing deionized water,
- b) adding a BTCS to the solution of step a).

13. (Original) A method as in claim 9, 10, 11 or 12 wherein said compound is trans sodium crocetinate.

14-51. (Cancelled).

52. (Original) A method of treating complications of diabetes comprising administering to a mammal in need of treatment a therapeutically effective amount of a compound having the formula



where:

Y = a cation

Z = a polar group which is associated with the cation, and

TCRO = trans carotenoid skeleton.

53. (Original) A method of treating Alzheimer's disease comprising administering to a mammal in need of treatment a therapeutically effective amount of a compound having the formula



where:

Y = a cation

Z = a polar group which is associated with the cation, and

TCRO = trans carotenoid skeleton.

54-56. (Cancelled).

57. (Previously presented) A method of treating diabetes comprising administering to a mammal in need of treatment a therapeutically effective amount of BTCS wherein absorbency of the highest peak which occurs in the visible wave length

range divided by the absorbency of the peak which occurs in the UV wave length range is greater than 7.5, and wherein the BTCS is TSC.

58. (Previously presented) A method of treating Alzheimer's disease comprising administering to a mammal in need of treatment a therapeutically effective amount of BTCS wherein absorbency of the highest peak which occurs in the visible wave length range divided by the absorbency of the peak which occurs in the UV wave length range is greater than 7.5, and wherein the BTCS is TSC.

59-64. (Cancelled).

65. (Currently amended) A method as in claims ~~14-25, 49-50, 52-53, 56-58 or 61-62~~ 52, 53, 57 or 58 wherein Y is a monovalent ion selected from the group consisting of Na⁺, K⁺ or Li⁺, or an organic cation selected from the group consisting of R₄N⁺, R₃S⁺, wherein R is H, C_nH_{2n+1} wherein n is 1-10, Z is selected from the group consisting of a carboxyl (COO⁻) group, a sulfate group (OSO₃⁻) or a monophosphate group (OPO₃⁻), (OP(OH)O₂⁻), a diphosphate group, triphosphate or combinations thereof, and TCRO is a conjugated carbon-carbon double bonds and single bonds containing carbon atoms, wherein four single bonds that surround a carbon-carbon double bond all lie in the same plane and said compound is linear.

66. (Currently amended) A method as in claims ~~14-25, 49-50, 52-53, 56-58 or 61-62~~ 52, 53, 57 or 58 wherein Y is Na⁺, K⁺ or Li⁺, Z is a carboxyl group, and the TCRO is less than 100 carbons and has pendant methyl groups.